# Mountain Views

Newsletter of the MLRA 6 Office, Lakewood, CO May, 2001


# Greetings From Cam

## Delivering Technical Soil Services


*J. Cameron Loerch, MO 6 Leader/Colorado SSS*
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First of all I would like to congratulate Dave Alstatt on a great career with the SCS/ NRCS. Dave has turned in his auger and spade for the good life on the other side of the soil pit. Colorado is proud of the 30-plus year contribution that Dave has made to the Soil Survey program. Please join me in wishing him well.

Back in March I attended the State Soil Scientists National meeting held in Salina, Kansas. The emphasis of the meeting was "Delivering Technical Soil Services". I want to share with you some of the comments and ideas presented by our national leaders.

Maxine Levin, Soil Survey Division Program Manager, encouraged us to work towards building a corporate structure surrounding technical soil services that will invent the future of soil survey in technical soil services.

Horace Smith, Director, Soil Survey Division, noted that "technical soil services is an area of the Soil Survey Program that we are trying to enhance, as it deals with promoting the use of soil survey products and the application of soil science in support of field office activities". Horace also highlighted the following issues involving soil survey operations:

* Populate and update NASIS with quality data.
* Implement the Soil Data Warehouse
* Develop an accountability process for non-mapping activities
* Product delivery – making soil survey products more accessible
* Update/revision of STATSGO and MLRA agricultural handbook 296.
* Implement the expanded MLRA concept for field project offices
* Emphasize technical soil services and urban interpretations.
* NRCS Graduate studies program
* Hiring new soil scientists
* World soil resources and international travel.
* Role of State Soil Scientist.

Maury Mausbach, Deputy Chief for Soil Survey and Resource Assessment, emphasized that "technical soil services are crucial to the success of the soil survey program". He challenged us to find "champions" for the soil survey program

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## Delivering Technical Soil Services

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from our communities. We need to be reaching out to new customers as a means to obtain advocates for the program. Technical soil services provide this opportunity. Other challenges that Maury presented to us include:

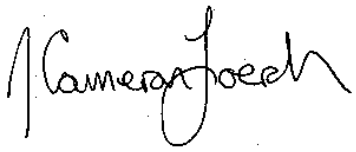
* Our soil scientists need to be "scientists" through READING, becoming active in professional groups and associations, and utilizing opportunities for self-improvement.
* Continue research and development activities on making the data and information accessible. Critical to the success of the soil survey.
* We are in exciting times for soil survey, we have electronic access to our product, we have new tools to map soils and to analyze the data and we have many opportunities for research and development.
* "Finally, and most importantly, we need to get the product into the hands of the public."

Data indicates that field soil scientists throughout the Southern Rocky Mountain Soil Survey Region (MO-6) spend 15 to 30 percent of their time on technical soil services. In most cases soil scientists working on progressive soil surveys provide technical soil services. As we look to the future regarding workload and staffing needs it is important to identify the technology transfer activities we are involved in, what we need to be doing, and what we would like to be doing in order to have a solid technical soil services program.

It is important that users of soils resource information appreciate the efforts that the field soil scientists have made in order to provide the technical service. From field observations, transects, mapping, database development, correlation, interpretation generation, map compilation, and manuscript development to delivery of information for a specific tract of land, that's a lot of work.

The next time you are in need of technical soils information, be sure to thank that soil scientist for the committed effort put forth to ensure that the information you receive is of high quality and serves your needs.

*ps. We are making copies of the meeting proceedings for each soil scientist.



## Report From Wyoming

*Darrell L. Schroeder, State Soil Scientist, Wyoming*
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On March 5, the state soils staff, project leaders, resource team soil scientists, and team leaders in Wyoming met to discuss the staffing for soil survey projects and technical soil services. The discussion included explaining the roles of the MLRA Offices versus the roles of the Wyoming state soils staff, the budgeting process and the policy related to CO-02 funds, the policy concerning certification and maintenance of Official Soil Data sets, and recruitment and retention of soil scientists. The group also identified the soils workload of the state office staff and within each of the teams.

This information will be used to develop a paper detailing the issues related to appropriate staffing for soil survey projects and technical soil services. Current staffing levels do meet the needs to complete initial soil surveys for Wyoming, to maintain certified official data sets, and to provide soils technical assistance to NRCS field offices in a timely manner. This information will be presented to the State Conservationist and the Quality Steering Team for further discussion in order to develop a strategy to address the issues.

## What's New On The Web?

*Carla Green Adams, Editorial Assistant, MO 6*
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*The Soil Survey of Arapahoe County, Colorado* is now available on the Colorado NRCS website and on CD. This 1971 survey has been out of print and out of stock for several years, and we're glad to be able to provide it to our customers in electronic form. The CDs are, like printed surveys, free of charge.

The location of Arapahoe on the Colorado state website is in the Soils section, under "Soils Products and Services." (http://www.co.nrcs.usda.gov/soil/sps/arapahoe-survey/arapahoeco.html)

The next soil survey in the works for CD and web posting is Adams County, Colorado.

While you're on the website, take a look around the Soils sections. The newsletters are posted on the MLRA page, as are maps. NRI information has its own section, and there are many links to interesting soils-related sites. If there is a site you would like to see linked to the Soils/MLRA section, please email me with your suggestion. Other MO6 web pages include:

http://www.co.nrcs.usda.gov/soil/soil-index.htm

http://www.co.nrcs.usda.gov/soil/mlra/mlra-index.htm

http://www.co.nrcs.usda.gov/soil/mlra/newsletters.html

http://www.co.nrcs.usda.gov/soil/mlra/maps&info.html

http://www.co.nrcs.usda.gov/nri/nri-index.htm

## NSSC Discussion Forums

*Tom Hahn, Soil Data Quality Specialist, MO 6*
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There are many sources of information on the Internet that can help us do our jobs. For those of you who have not browsed your way to this one yet, there is a valuable web site titled "NSSC Discussion Forums" (http://www.statlab.iastate.edu:2000/ ). This is a site sponsored by the National Soil Survey Center, where anyone can post a question on a variety of soil-survey related topics. The site is moderated by people from the NSSC, who are responsible for finding an answer to each question. Anyone can contribute comments and answers to any question posted. All questions and responses are saved, going back several years. Because this site is available to the public, many students post questions. It can be interesting to see the questions that beginning soil science students ask.

Each forum has a designated subject area. Some of the subject forums I visit occasionally are:

- Data Population (includes NASIS questions)
- Research/Investigations
- Soil Survey Laboratory
- Soil Taxonomy
- Interpretations (with subdivisions for Forestland, Agricultural Waste, and Engineering)
- Hydric Soils

Currently there is an interesting discussion of lamellae in the Soil Taxonomy Forum; a discussion of flooding frequency and component restriction (NASIS population) in the Data Population forum; and an interesting prime farmland question (posted by Alan Walters) in the Interpretation Forum. I encourage you to check these out.

# NASIS 5.0: What's New?

*Alan B. Price, Soil Data Quality Specialist, MO6*
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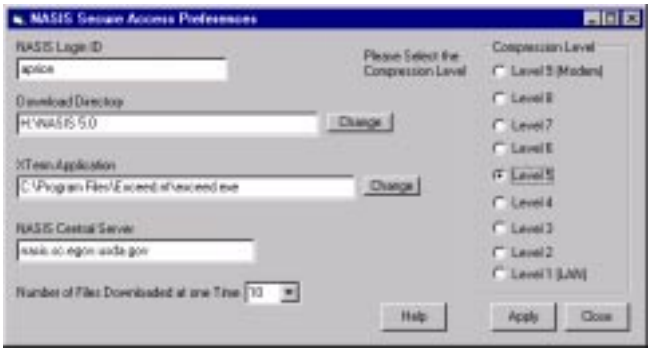
After many delays, conversion of pedon data, and moving and converting data from 17 MLRA Offices to one central server in Ft. Collins, CO, NASIS 5.0 is up and running. Initial reaction from most of the field folks is that performance is better. Of course the big advantage to the central server is that now data can easily be shared regardless of where the original data was created. When I say "data," that includes queries, reports, and interpretations. We no longer have to copy a favorite map unit generator (MUG) report from one MO to another where our data is stored.

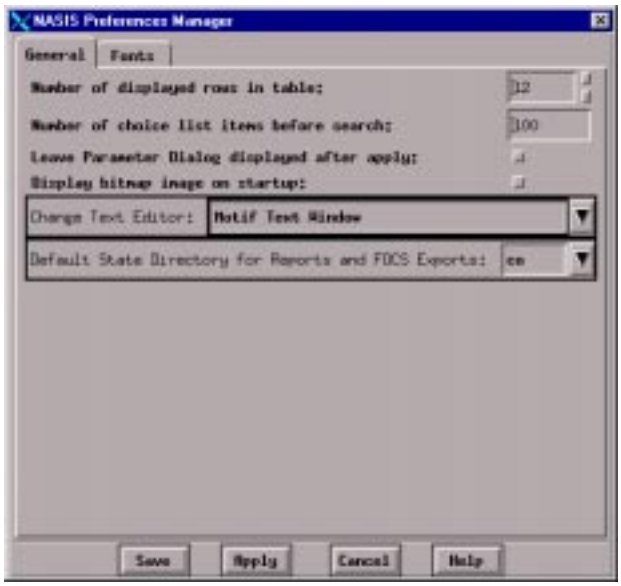
All of you should have a new login and password on the central server. If not, call Tammy Cheever or Steve Spiedel at the NASIS Hotline (402-437-5379 and 402-437-5378 respectively).

Every PC that accesses NASIS should also have the secure access software. If not, download and install these files from http://nasis.nrcs.usda.gov/downloads/. Two files are needed and should be installed on Windows NT computers using the administrator login. Once installed, the software is started by "C:\Program Files\USDA\NASISSecureAccess\NASISSecureAccess.exe". All users must edit their preferences before starting NASIS as displayed in this example (use your own Login ID):




After editing, apply and close this window.

To start NASIS, click on the "Start NASIS" button. After entering your password the now familiar NASIS screen should appear. While running your first NASIS session, all users should enter their preferences. Within NASIS click on Options/NASIS Preferences. On the "General" tab, select your "Default State Directory for Reports and FOCS Exports." Click on "Save."




Next run the National query "User record for yourself." Then click on View/NASIS Users/NASIS User. Enter or correct your phone number and email address.

The instructions for configuring your printers are in Appendix C of the new NASIS 5.0 "Getting Started" manual. You can view or download all or part of this manual from http://nasis.nrcs.usda.gov/documents/tutorial5/. Your print job should arrive as an attachment to an email. If not or if the printout does not appear as promised, give your designated MO person a call for assistance.

When you save a report within NASIS, the file is stored on the central server and must be downloaded to your PC for inclusion in reports, manuscripts, etc. When naming

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## NASIS 5.0: What's New?

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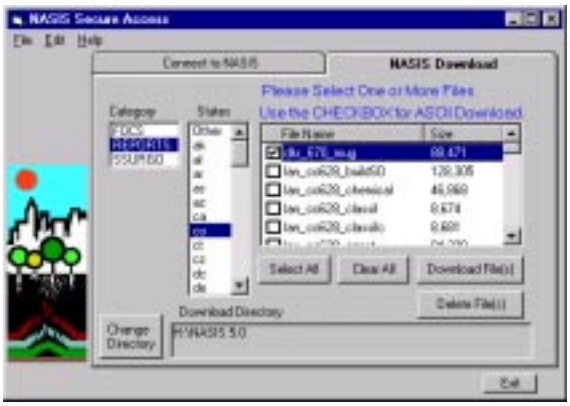
saved reports, use the format "initials_survey number_report name" (see format below). To download reports, activate the "NASIS Secure Access" window and click on the "NASIS Download" tab. Click on "REPORTS", enter your password (again) when prompted, click on your state (e.g., CO, NM, UT, WY), put a checkmark in the box left of the report(s) you want, andthen click on the "Download File(s)" button as shown in the window below.




After another password prompt, your files will be downloaded to the directory on your PC that you specified when you edited your NASIS Secure Access preferences. These files can now be edited, printed, or stored.

Once you have successfully downloaded reports, immediately delete them from the central server using the "Delete File(s)" button above.

Hopefully all of you are now functional in NASIS 5.0 and are continuing to progress towards the completion of quality databases.

## ER Mapper Software

*Chris Mueller, GIS Specialist, Colorado*
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The GIS section is very excited to announce that we have a copy of ER Mapper. ER Mapper is a image processing software that will allow us to open our imagery, display it, integrate it with other data, make enhancements, and get it out as a map or data file.

Working with image files in a GIS was rather cumbersome due to the large file sizes. This is no longer an issue with ER Mapper's compression utility. Files sizes can be reduced by as much as 95% with little or no loss of resolution.

Most, if not all, of our GIS applications require our imagery to be included with other data to create mosaics or vector overlays. ER Mapper will allow us to easily orthorectify images to match existing vector or image data. Also included is an image mosaicing and balancing wizard that will allow us to create seamless mosaics with uniform color tone across image boundaries.

In our ongoing work with GIS in the field, we are able to obtain existing image data from other entities; more often than not, these images are in a different map projection than what is commonly used by NRCS. The ER Mapper projection utility enables coordinates to be defined in more than 700 map projection/datums around the world and converted from one coordinate system to another.

One of our biggest priorities is the implementation of Soil Data Viewer. To make SDV effective, a photo image of the soil survey area is imperative. In the past we have relied on the National Cartographic Center to provide us with seamless county coverage for SDV sites in Colorado. However, due to the increasing national workload, Ft. Worth is unable to provide the data as fast as they would like. Therefore, we are going to use ER Mapper to mosaic raw DOQQ files into a seamless coverage that can be compressed to a manageable file size.

Needless to say, we are pretty enthusiastic about this software. We look forward to ease of use and the robust functionality it provides in image processing.

# SBAAG Welcomes New Participants

*Jon Gerken, State Soil Scientist, Ohio*
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SBAAG will be welcoming new participants in the next several months. Several of the people who began with us when SBAAG was reactivated by Division Director Horace Smith have left the group, either because they have increased commitments in other areas or because they no longer are serving in the job capacity they were selected to represent within the group.

- Cathy Scott, Soil Scientist from Colorado, will replace Jodi Boyce.
- Steve Lawrence, Soil Data Quality Specialist attached to the Raleigh MO will replace David Kriz.
- Lyle Kohlmeier, Area Resource Conservationist from Kansas, will fill a newly created advisory position from within conservation operations.
- Bob Dayton, Agronomist at the Natural Resources Inventory and Analysis Institute at Iowa State University, will replace Bill Adams as the liaison to the Resource Inventory Division.
- Also joining the group in advisory roles are Bob Ahrens, recently selected as Director, National Soil Survey Center, and Mary Thomas, acting CIO and Information Technology Division Director.

Welcome to all of the new participants, and many thanks to the individuals who have rotated off for all of their hard work and good ideas and input. The list of those rotating off includes: Jodi Boyce from Colorado; David Kriz from Florida (now Virginia State Soil Scientist - congratulations Dave); Bill Adams with the Resource Inventory Division at Ft. Worth; Bernie Shafer from ITC, who retired; and Bill Puckett, now MO Leader in the Auburn, AL MLRA Office. Thanks to all of you.

SBAAG has established a web page to help communicate with others in the soil survey program. You can access the page at http://nasis.nrcs.usda.gov/sbaag/ or you can go to the NASIS home page at http://nasis.nrcs.usda.gov/ and click on SBAAG on the side bar.

The web page includes several documents that have been developed by SBAAG. We invite you to review the documents and provide comments if you chose to.

The web page also includes several lists of issues that have been identified to us. Through these lists, you can determine whether an issue of which you think SBAAG needs to be aware, has already been identified. We do welcome comments relating to the priority you place on issues already identified.

Another list identifies issues for which SBAAG thinks work has been completed. If there are aspects of these issues which you think need more attention, be sure to pass your comments on to us.

Several means for you to communicate with SBAAG have been incorporated into the web page. The Members link at the top brings up a list that shows all of the names of group members along with their phone numbers and a hot link to send e-mail to them.

There is also a link at the bottom of the page that will allow you to send a message to all SBAAG members at once. Also included is a forum link, which allows you to post an issue for consideration by SBAAG. The forum link also allows others accessing the site to post comments on the same issue.

We hope that the web page will make it easier for you to keep up to date on SBAAG activities. We also hope that you will take the opportunity to provide us with some feedback regarding your needs and priorities for NASIS development.

*(This article was previously published in The National Cooperative Soil Survey Newsletter, Issue 12, August, 2000.)*

# Another Warrior Has Retired

*Lee Neve, Soil Survey Project Leader, Colorado*
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My career as a soil scientist started in Walsenburg near the end of March 1978. Working on the Huerfano County Soil Survey along Colorado's Front Range gave me very little contact with soil scientists working on the western slope.

I did not meet Dave Alstatt until March 18, 1984 at the Soil Technology-Measurement and Data Technology course held at the technical center in Portland, Oregon. It was a Sunday night and everyone had been filtered in from their long plane rides and checked in at the Continental Hotel downtown. As unimpressed as I was with the hotel, it did have a very adequate lounge on the first floor. It was there that I met Dave. We sat in that lounge until midnight, hashing over various commonalties within our jobs and life in general. We both had the same correlator for our respective surveys, and that proved to be an interesting topic for discussion. Dave often operated somewhat unconventionally and often said what many others wanted to say. During that week Dave and I did everything together, and a bond formed that lasted 17 years.

Even though we did not see each other often, every time a soil scientist workshop came up, we were again sitting on a barstool hashing over our experiences. Dave has worked on many surveys over the years and supervised a wide variety of personalities. Stories resulting from many encounters with these characters provided interesting stories, which will be carried with him. His patience as a trainer was unequaled in this state. He has always had a good rapport with his employees and supported them as much as possible.

I finally had the opportunity to work with Dave in 1998 on the last summer detail to Rocky Mountain National Park. I had to develop a project for using helicopters to access very remote areas in the park. *(See Mountain Views, January, 2001 issue for a related article.)* Dave had used helicopters in the past and provided valuable input on identifying and coordinating the various sites that were to be sampled.

Most of all, I will always remember a training technique he demonstrated to two of the younger crew members on the detail. The mountain soils in Rocky Mountain National Park were difficult to excavate because of large amounts of cobbles and stones throughout the profile. We all took turns pounding in the pits, and worked to remove the rocks to get the soil profile deeper. Melissa Trenchik and Jody Boyce had the muscle to do the work, but their techniques quickly depleted their energy. Dave and I both had the same problem, being short in stature and slight in build. Having to dig in the rocks over the years has taught us how to maximize effort with-out incapacitating our bodies. Dave put on an exhibition that left both Jody and Melissa bowing in awe, methodically picking and chopping with the tile spade until gravel, cobbles, and stones were dislodged. Dave plainly demonstrated that he knew how to get the job done.

Dave has retired now and dug his last hole for our agency. Dave's job will be filled, but his expertise will be missed and not replaced. I certainly will miss the times that we were together over the years. At least I have a pictorial collage of our experiences in Rocky Mountain National Park on my office wall to help me remember him. In the meantime, I guess someone else will have to fill his barstool next to mine at the next workshop.

# Selenium in the Mancos Soils of the Uncompahgre Valley

David Dearstyne, Soil Scientist, Colorado
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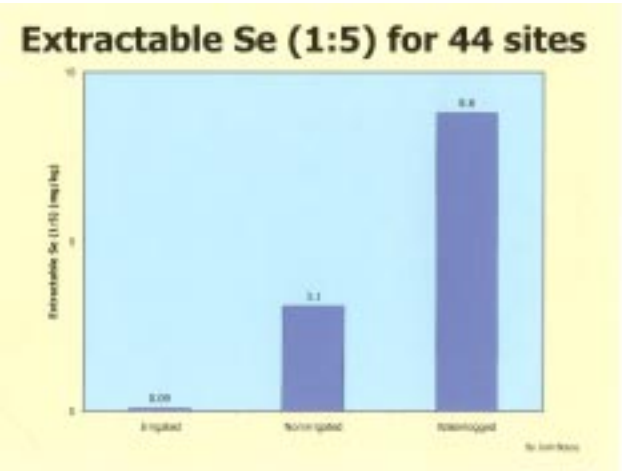
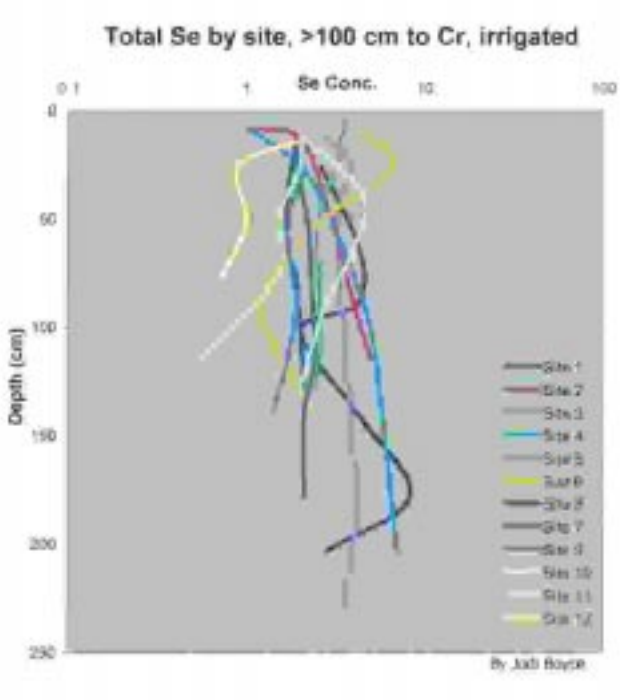
For the past 2-1/2 years, the Ridgway Soil Survey Team has been providing technical assistance to the Gunnison Basin Selenium Task Force and the Shavano Soil Conservation District. This assistance has been provided in the forms of prioritizing and targeting the update and remapping of Mancos Shale soils east of the Uncompahgre River and south of the Gunnison River, within the Ridgway Project Soil Survey area. In addition, the Ridgway Soil Survey Team, at the request of the Task Force and Shavano SCD, collected soil samples for selenium analysis in conjunction with the gathering of supporting soil survey component documentation for the Ridgway Soil Survey.

To date about 95 percent of the Mancos Shale area within the project soil survey, east of the Uncompahgre River within the irrigated valley and surrounding area, has been mapped. To date 44 sites within this area, including 211 individual soil samples, have been collected for selenium analysis. Of these sites, 21 were in irrigated soils, 20 were in non-irrigated soils, and 3 were in wetland soils. These 44 sites involved 18 different mapping units derived from Mancos or Mancos/Mixed soil materials. The 211 samples were collected on a horizon basis. Site depths sampled ranged from less than 40 inches to greater than 9 feet. Where applicable, soft shale bedrock and hard shale bedrock were also collected by horizon for analysis. Samples were stored in a controlled temperature/moisture setting at the soil survey office. These samples were periodically sent to the Bureau of Reclamation (BOR) lab in Denver, where they underwent preparation for laboratory analysis. Analyses run were total selenium, soluble selenium (1:5 extract), and electrical conductivity (EC).




Once the lab data was received, it was compared using the following external comparisons:
1) Selenium in irrigated versus non-irrigated soils;
2) Selenium in soils less than 40 inches to shale contact versus greater than 40 inches;
3) Selenium in soil material versus soft shale bedrock;
4) Selenium in soils that are less than 40 inches to shale contact, irrigated versus non-irrigated;
5) Selenium levels in soils greater than 40

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## Selenium in the Mancos Soils of the Uncompahgre Valley

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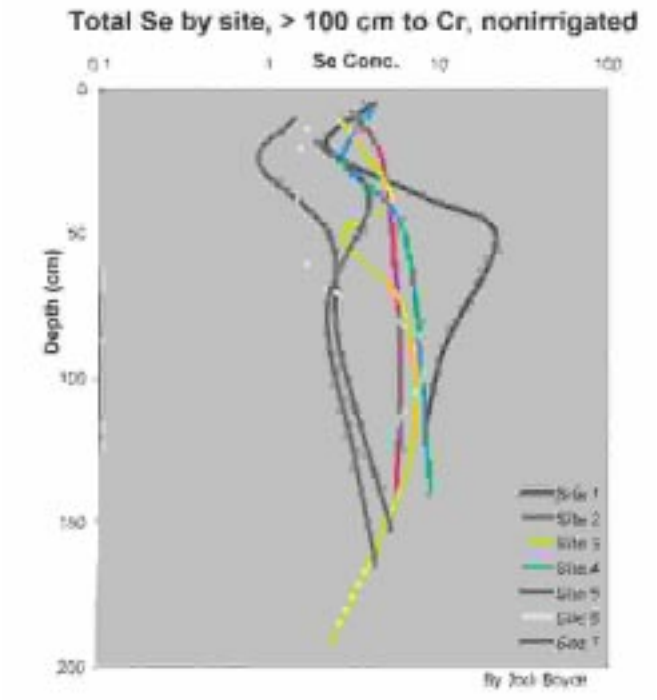
inches to shale contact, irrigated versus non-irrigated;
6) Selenium levels in wetland soils versus very deep irrigated soils;
7) Total selenium irrigated soils versus soluble selenium irrigated soils;
8) Total selenium non-irrigated soils versus soluble selenium non-irrigated soils; and
9) Selenium levels in soils high in gypsum versus soils low in gypsum.

Statistical analysis of the data, using the previously noted comparisons and several others, was conducted by Sam Schaeffer, Engineer for the BOR. Several statistical correlations were found. The strongest of these correlations was the difference in soluble selenium levels in irrigated versus non-irrigated sites. Mean soluble selenium levels (1:5 extract) were found to be 34 times greater in non-irrigated soils than in irrigated soils. Ranges of individual sites using this comparison showed little overlap in soluble selenium levels. Another correlation of




significance was soluble selenium levels did not increase with depth in irrigated soils. This correlation supports the theory that a large portion of the original soluble selenium, pre-irrigation, has been leached from the soil profile ( in some sites to greater than 9 feet). This correlation held true even in the moderately well drained soils, which had redoximorphic indicators between 3 and 5 feet. This leaching effect in irrigated soils was also indicated when comparing graphs of irrigated and non-irrigated sites with data plots displaying total and soluble selenium levels. A distinct separation occurred between the soluble and total selenium levels on the irrigated comparison. This was not the case in the non-irrigated comparison.

It is important to note that soluble selenium levels in the irrigated sample sites were still relatively high when compared to selenium levels in soils from other areas of the western United States. However, soluble selenium levels within the soil profile of irrigated soils, have been dramatically reduced when compared to the soluble selenium levels in non-irrigated soils, which are extremely high in comparison to the rest of the western United States.

With only 3 wetland sites sampled, it is difficult to draw any but the most limited and general comparisons or conclusions. More research is needed to better quantify these soils. The selenium concentrations, both soluble and total, were highly variable from the 3 sites. When comparing the lowest selenium levels from these 3 wetland sites, this site still was significantly higher in both total and soluble selenium levels than the means for the irrigated sites. The mean from the 3 wetland sites was 98 times greater in soluble selenium than the mean for the irrigated sites. This would tend to support the theory that selenium, like soluble salts, is being transported and deposited within the soil profile, at or near the surface, in poorly or very poorly drained Mancos-derived soils.

In summary, the soils data collected and analyzed, would tend to support the theory that large amounts of soluble selenium in

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## Selenium in the Mancos Soils of the Uncompahgre Valley

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both alluvial and residual, irrigated, Mancos-derived soils has been leached out of the soil profile from past irrigation practices. Further study is suggested to help determine what has happened to this soluble selenium leachate. Is it residing in some deeper hydrologically enriched layer? Or has it been transported through the deep hydrologic system of the Uncompahgre valley, into the surface waterways and out of the area?

Of concern to selenium loading in the valley, is the possibility of subjecting presently non-irrigated soils, extremely high in soluble selenium, to new irrigation and subsequent deep percolation. This new irrigation may occur as farmland, pasture, homesite development, water impoundments, and other water using activities. The soils information collected indicates that if these activities involve large enough areas in total, that significant levels of additional soluble selenium may be leached into the deep hydrologic and surface water systems of the valley.

*(This article was previously published in The Waterline, No. 132, published by the Colorado State University Cooperative Extension Service.)*

## Ute Mountain Farm and Ranch Enterprise

*Doug Ramsey, Project Leader*
<doug.ramsey@co.usda.gov>
*Mike Petersen, Resource Soil Scientist*
*Tim Wheeler, Soil Scientist*

As the alfalfa begins to turn an emerald green of spring, so do the prospects for the future of the Ute Mountain Ute Tribe's Farm and Ranch Enterprises. Doug Ramsey (Soil Survey Project Leader at Cortez, CO) has been working with the staff at the Ute Farm and Ranch Enterprise since 1993, the year the farm was first designated to receive irrigation water from the Dolores Project. This new project delivered water to irrigate virgin desert soils on the Ute Mountain Ute Indian Reservation. Now that all 109 center pivots covering 7,500 acres have been installed, the assistance has changed from basic mapping of the soils to assisting in interpreting soil properties and reactions that occur as the farm moves toward full production.

In early April, Mike Petersen (Area Resource Soil Scientist from Greeley, CO) and Tim Wheeler (Soil Scientist from the Colorado State Office) joined Doug and Matt Merritt (Resource Conservationist at Towaoc, CO) in mapping several pivots for salinity and electrical conductivity with Electronic Magnetic Induction (EMI) equipment and associated computer software. The goal of this project was to assess the potential of using this advanced equipment to assist Paul Evans, Farm Manager and Bill Cone, Irrigation Manager in understanding the variations and properties of the soils on the Farm. By better understanding the variations and locations of the different soils under each pivot, individual management plans can be developed for each pivot or for similar pivots. As a vital part of this project, NRCS soil survey data covering all the irrigated areas has been digitized and provided to the Farm and Ranch staff for use in their GIS system. The progressive approach of the Farm and Ranch staff shows when they load and are using this data within 12 hours of completion by Chris Mueller (GIS specialist in Lakewood, CO). The digitized data, precision yield data, and herbicide and fertilizer applications applied with GPS-controlled precision application equipment will assist the staff in making wise agronomic decisions based on soil types and crop needs.

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## Ute Mountain Farm and Ranch Enterprise

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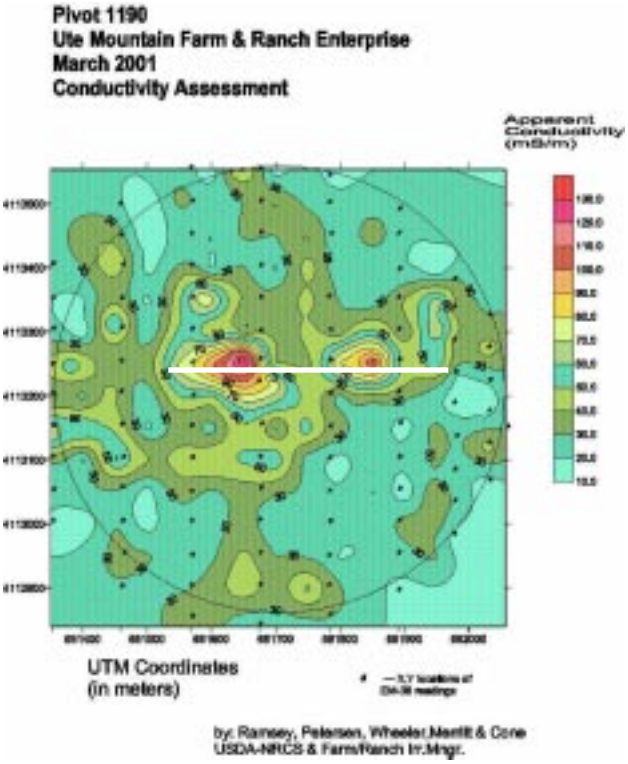
After two days of fieldwork, preliminary maps were prepared and discussed with the Farm Managers. Individual soil samples, 144 of them to be exact, were taken from reference sites under each pivot at the 1-foot to 4-foot depths for lab analysis and correlation. After the rush of spring planting and taking time for laboratory analysis to be completed, Doug and Matt will manipulate the data through the ESAP and SURFER software with Mike Petersen's assistance and work with Paul and Bill to better understand their farm and assist them in the wise use of their soil and water resources.

Shown below is a pictorial view of what we can provide with the data collection to determine where conductivity indicates elevated values, where potential problems exist, and how to manage in the future.




## MO 6 Soil Survey Manuscript Status

*Tom Hahn, Soil Data Quality Specialist, MO 6*
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**Uinta Area, Utah** – technical review is complete; currently preparing for English edit.

**Summit Area, Utah** – technical review is complete (by MO3); currently preparing for English edit.

**Douglas-Plateau Area, Colorado** – English edit and typeset are complete; currently at state office for last proof-reading.

**San Miguel Area, Colorado** – currently undergoing English edit and typeset.

**Georgetown Area, Colorado** – in MO for technical review.

**Dinosaur National Monument, Colorado-Utah** - English edit and typeset are complete; currently at state office for last proof-reading.

## Interesting Web Sites

Just for your information, maps from the National Wetlands Inventory and topographic maps are available at these websites:

*NWI Maps:*
http://wetlands2.nwi.fws.gov/nwi_mapplet/

*Topographic Maps:*
http://www.topozone.com/

Another interesting site to check out is the *Association of Women Soil Scientists* at:
http://awss.homestead.com

The **MLRA 6 Office** is located at
655 Parfet Street, Room E200C
Lakewood, Colorado, 80215
http://www.co.nrcs.usda.gov
*ph:* 720/544-2819
*fax:* 720/544-2965

**J. Cameron Loerch,**
**State Soil Scientist and MO6 Leader**

## NCSS Conference

The Colorado NCSS cooperators are co-hosting the **National Cooperative Soil Survey Conference** in Ft. Collins, CO June 25-29, 2001. The conference convenes every other year on the odd-numbered year to discuss and develop solutions to issues of national concern to the National Cooperative Soil Survey. The theme of this conference is *"Building for the Future: Science, New Technology & People."*

A tour highlighting our cooperative work in Rocky Mountain National Park is planned for the 27th. NRCS employee participation is limited in order to ensure space availability for all cooperators. NCSS cooperators interested in the conference can go to the website for more information: http://129.186.101.61/NCSS/